

CHICAGO

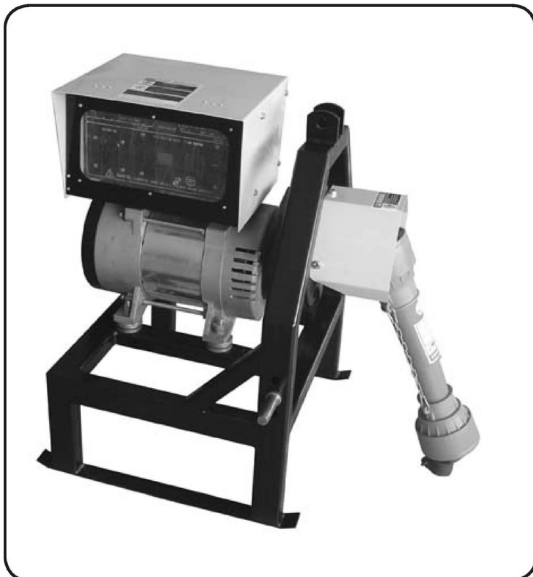
Electric Generators

15,000 W, 540 RPM

PTO GENERATOR

Model 65309

SET UP, OPERATING, AND SERVICING INSTRUCTIONS



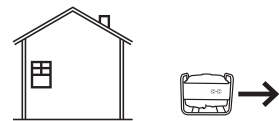
⚠ DANGER

Using an engine indoors **CAN KILL YOU IN MINUTES.**

Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.



NEVER use inside a home or garage, **EVEN IF** doors and windows are open.



Only use **OUTSIDE** and far away from windows, doors, and vents.

Visit our website at: <http://www.harborfreight.com>



**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

Copyright© 2008 by Harbor Freight Tools®. All rights reserved. No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

For technical questions or replacement parts, please call 1-800-444-3353.

SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

IMPORTANT SAFETY INFORMATION

In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

CAUTION

CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.



WARNING! Read all instructions. Failure to follow all instructions listed below may result in fire, serious injury and/or DEATH.

The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SAVE THESE INSTRUCTIONS

SET UP PRECAUTIONS

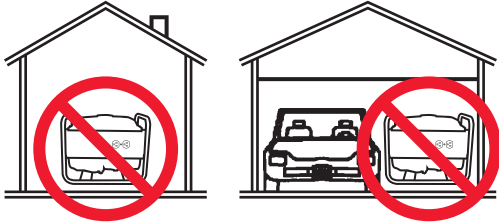
1. Follow precautions and instructions provided by tractor manufacturer.
2. Gasoline fuel and fumes are flammable, and potentially explosive. Use proper fuel storage and handling procedures. Do not store fuel or other flammable materials nearby. Use only in a well-ventilated area.
3. Have multiple ABC class fire extinguishers nearby.
4. Set up and use only on a flat, level, surface that is capable of supporting this Generator, the tractor and the forces applied during use of this tool.

5. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during set up.
6. Use only lubricants and fuel recommended in the engine manual provided by the tractor manufacturer.
7. Permanent wiring or wiring into an existing electrical service **MUST** be done by a licensed electrician, and **MUST** comply with all applicable codes.
 - Don't connect the generator directly to a building's wiring. A portable electric generator that is connected directly to utility line can 'back feed' into the power lines. This lower voltage created by the generator can be increased to thousands of volts by line transformers. That unexpected voltage can injure or even kill a utility lineman making outage repairs many miles away. Hard wiring can also cause expensive damage to utility equipment and the generator.
 - A hard wired generator must be installed by a licensed electrician with a UL approved cut-off switch that will automatically disconnect the home from the power grid when the generator is being used. Check with the local utility company before having a generator hard-wired to a building.
8. Make sure the generator is properly grounded to avoid electrical shocks. Connect a 6 ga. or larger insulated copper wire to the Ground Connection on the Control Panel. Connect this wire to a suitable external ground, such as a metal stake in the ground.
9. Don't overload the generator. The total wattage used by the devices should be less than the output rating of the generator. If you put too many devices on the generator, it could seriously damage them. Overloading the generator can also cause fire. This generator is rated at 15,000 Watts. NOTE: At start-up, devices draw more power in a surge than they do during continuous operation. When figuring total wattage of all devices connected to this generator, use the higher start-up rating of each device.
10. Do not exceed the current limit specified for any one receptacle. Refer to the Specifications chart for amperage limits on each receptacle.

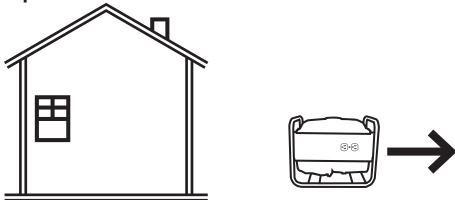
OPERATING PRECAUTIONS

1.  **CARBON MONOXIDE HAZARD**
Using an engine indoors CAN KILL YOU IN MINUTES.

Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.



NEVER use inside a home or garage, EVEN IF doors and windows are open.



Only use OUTSIDE and far away from windows, doors, and vents.

2. The exposed PTO shaft is dangerous. Do not operate the generator without the guards in place and in good condition. Stay away from the PTO shaft during operation.
3. Drive shaft Guards must be in place and not spinning. Drive shaft must be secured at both ends.
4. Keep children away from the equipment, especially while it is operating.
5. Do not leave the equipment unattended when it is running. Turn off the equipment (and remove safety keys, if available) before leaving the work area.
6. Wear ANSI-approved safety glasses, hearing protection, and NIOSH-approved dust mask/respirator under a full face shield during use.
7. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to a heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near the engine's magneto or recoil starter.
8. Use only accessories that are recommended by Harbor Freight Tools for your model. Accessories that may be suitable for one piece of equipment may become hazardous when used on another piece of equipment.
9. Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Electrical sparks may ignite the dust or fumes.
10. Keep the generator, tractor, and surrounding area clean and clear of debris at all times.
11. Stay alert, watch what you are doing and use common sense when operating this piece of equipment. Do not use this piece of equipment while tired or under the influence of drugs, alcohol or medication.
12. Dress properly. Do not wear loose clothing or jewelry. Keep hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
13. Do not overreach. Keep proper footing and balance at all times. This enables better control of the equipment in unexpected situations.

14. Do not cover the engine or generator during operation.
15. Do not handle any electrical device while standing in water, while bare-foot, or while hands or feet are wet. **ELECTRICAL SHOCK WILL RESULT.**
16. Excessively high drive speeds are dangerous. This unit was designed for the PTO shaft to turn at 540 RPM. Do not operate the Generator at excessively high speeds.

Extension Cords

1. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. **(See Table A.)**
2. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. **(See Table A.)**
3. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required. **(See Table A.)**
4. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size. **(See Table A.)**
5. If you are using an extension cord outdoors, make sure it is marked with the suffix "W-A" ("W" in Canada) to

indicate it is acceptable for outdoor use.

6. Make sure the extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
7. Protect the extension cords from sharp objects, excessive heat, and damp or wet areas.

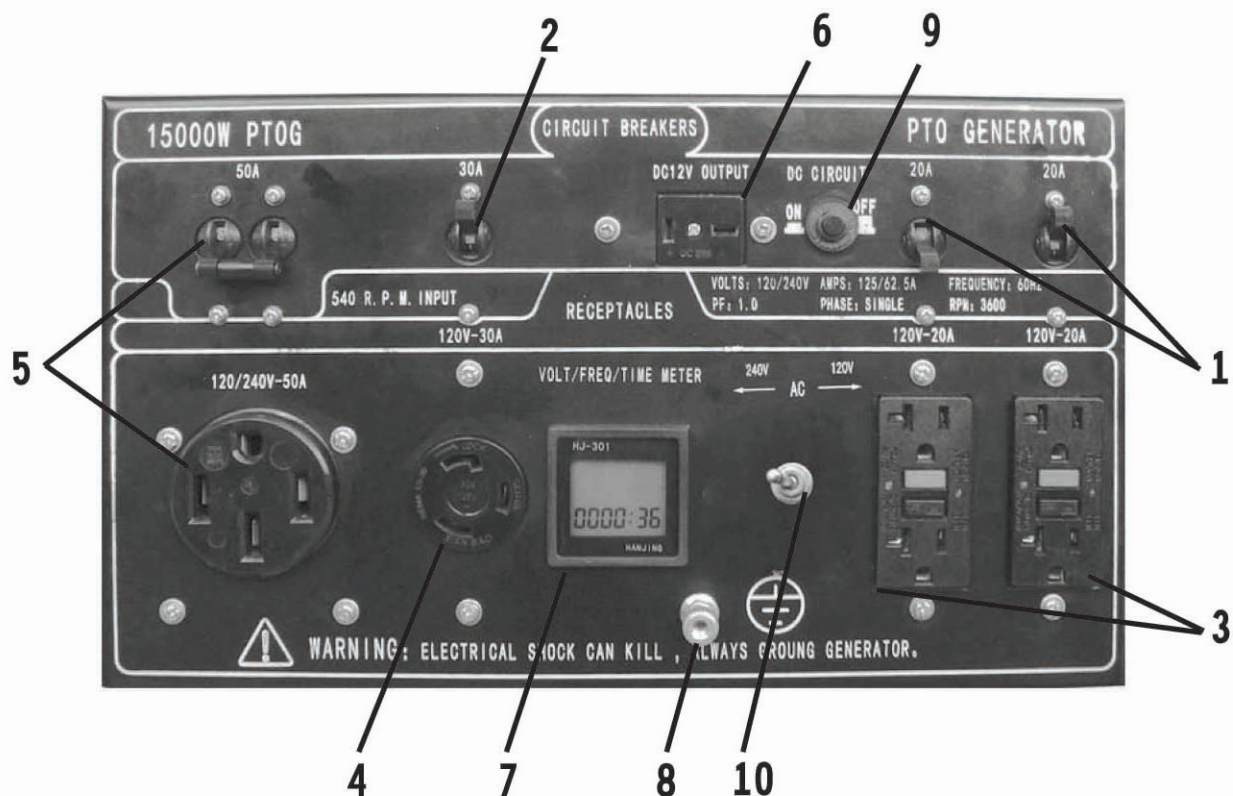
RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120/240 VOLT)					
NAMEPLATE AMPERES (at full load)	EXTENSION CORD LENGTH				
	25'	50'	75'	100'	150'
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-
TABLE A		* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.			

SERVICE PRECAUTIONS

1. Wear ANSI-approved safety goggles during set up and maintenance.
2. Turn tractor switch off and remove key after use.
3. Unconditioned electrical power can damage sensitive equipment. Use a line conditioner (sold separately) between this generator and the devices.
4. Maintain labels and nameplates on the equipment. These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
5. Store equipment out of the reach of children.



**SAVE THESE
INSTRUCTIONS.**



CONTROL PANEL FEATURES

1. **20 Amp Circuit Breakers.** Each circuit breaker protects a 125 V~ outlet against short or overload. These are “push to reset” type.
2. **30 Amp Circuit Breaker.** Protects the 30 Amp 125 V~ outlet against short or overload. This is “push to reset” type.
3. **Duplex 125 V~ GFCI Receptacles.** Use these for 125 V~, 60 Hz, single phase loads up to 20 A (combined per duplex outlet).
4. **Single 125 V~ Receptacle.** Use this for 125 V~, 60 Hz, single phase devices up to 30 A.
5. **Single 125/250 V~ Receptacle and circuit breakers.** Use a 4-blade grounded connector to operate 125/250 V~, 60 Hz, single phase loads requiring up to 50 Amps of current up to 12,000 Watts (12kW) of power. Use a connector rated to 250 Volts, 50 Amps with a same-rated 4-wire set. The 50 Amp circuit breakers protect each hot line of the circuit.
6. **Single 12V DC receptacle.** Used to power 12VDC loads at 8.3 Amps.
7. **Volt / Frequency / Time Digital Meter.** Used to monitor the AC voltage, frequency and operating speed.
8. **Grounding Terminal.** Connect to #6 AWG copper wire or larger to connect to an earth-driven copper or brass grounding rod.
9. **Amp Circuit Breaker.** Protects the 8.3 Amp 12 DC outlet against short or overload. This is “push to reset” type.
10. **Voltage Switch.** 240V on the left, 120V on the right.

BASIC SPECIFICATIONS

PTO Operating Speed	540 RPM
PTO Power	At Least 25 HP
Output Shaft	1-3/8" diameter shaft with 6-tooth spline
Rated Continuous Output	15,000 Watts
Rated Maximum Output	16,000 Watts
Phase	1 (single) phase
Receptacles	<ul style="list-style-type: none">• 12 VDC, 8 A, 2-prong outlet• 2 X 125 V~, 20 A, duplex GFCI outlets (5-20R)• 125 V~, 30 A 3-blade twist lock outlet (L5-30R)• 125/250 V~, 50 A 4-prong outlet (14-50R)

UNPACKING

When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

Included components:

- Generator unit
- PTO shaft
- PTO guard

SET UP INSTRUCTIONS



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

⚠️ WARNING

TO PREVENT SERIOUS INJURY

FROM ACCIDENTAL STARTING:

Turn the Power Switch of the equipment to its "OFF" position, wait for the engine to cool, and disable the engine before assembling or making any adjustments to the equipment

⚠️ WARNING

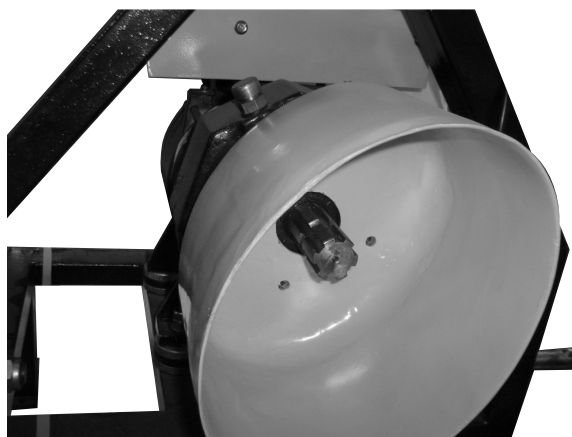
TO PREVENT SERIOUS INJURY

FROM ELECTRICAL SHOCK:

A licensed electrician must do all installation work, including earth-ground connection.

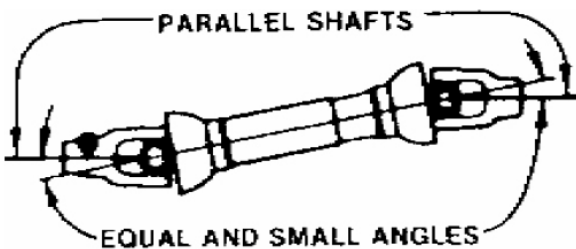
Keep this generator and all electrical wires, cords and components dry.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

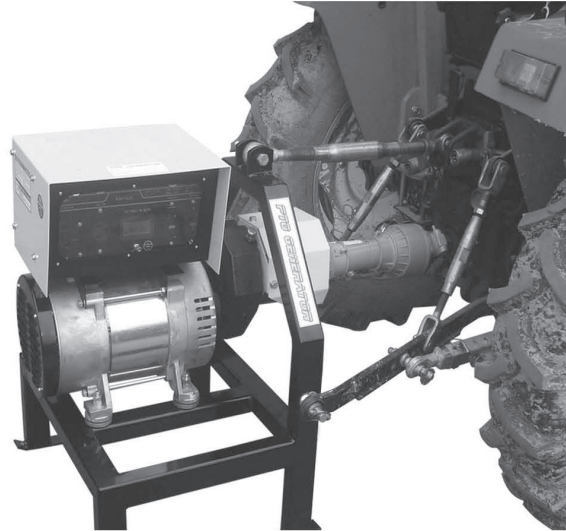


1. Attach the PTO (power Take-Off) Shield to the Generator using the supplied bolts and washers. Adjust and tighten securely, as shown above.

2. The PTO shaft must be attached to the tractor (not included) and the Generator. The ends of the PTO shaft slide into the Generator Gearbox, and the tractor PTO drive.
3. **⚠WARNING!** The PTO shaft must fit properly into the PTO drive. Do not attempt to use this generator if the PTO shaft does not fit properly. Severe injury or property damage may result if the Drive shaft comes loose during operation.



4. When installing the PTO shaft, ensure that it is aligned as (seen from above) with both the Generator and the tractor. Also keep the vertical difference of the Generator and tractor as small as possible to minimize the angle of the Drive shaft U-joints.
- Note:** Aligning the shafts minimizes torsional forces which tend to topple the Generator. Minimizing vertical angles reduces friction, heat and wear on the U-joints of the PTO shaft.



Typical Generator Set Up
(Tractor and hitch attachment components not included.)

5. Attach the generator to the tractor using all 3 connection points and appropriate hardware (not included). The connection method must prevent the generator from twisting during operation.
6. The Generator must be on a solid, level surface that is capable of supporting its weight and the forces applied during use.
7. Check the Gearbox oil level (see maintenance section of this manual).
8. Before operating the Generator, it must be grounded. Grounding Terminals are provided on the Control Panel and on the Rear Vent panel of the Generator. Use #6 AWG copper wire or larger to connect to an earth-driven copper or brass grounding rod. Do not operate the Generator without grounding.

OPERATING INSTRUCTIONS



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.



Inspect Generator and equipment looking for damaged, loose, and missing parts before set up and starting. If any problems are found, do not use equipment until fixed properly.

Start Procedure



Before starting the engine:

- a. Follow the Set Up Instructions to prepare the equipment. Follow all instructions in the separate tractor manual.
 - b. Inspect the generator and tractor.
 - c. Fill the tractor engine with the proper amount and type of fuel and oil.
1. Set the tractor on a flat surface. Set the brake on the tractor. Ensure that it is not in gear, and cannot move during operation.
 2. Unplug all loads from the Generator before starting to prevent permanent damage to connected devices.
 3. Start and operate the tractor according to the provided engine manual.
 4. Engage the tractor PTO drive.
 5. Set the tractor's PTO speed to 540 RPM.

6. Test each GFCI outlet by pressing the TEST button. The green light on that outlet should go out. Then press the RESET button. The green light on that outlet should come back on. If either GFCI outlet does not function as described have a qualified electrician repair the generator before use.
7. With the devices turned OFF, plug the devices into the appropriate outlets.

⚠ CAUTION! Do not plug in or unplug electrical loads while the loads are turned on.

8. Turn on the devices one at a time from the largest to the smallest. Check the frequency meter reading on the Control Panel. If the reading has dropped below 60 Hz, do not connect any additional loads.
9. Be sure that all devices are in good working order before connecting them to the generator. If a device begins to operate abnormally, becomes sluggish, or stops suddenly, turn off the device. Then disconnect the device and examine it for signs of malfunction.

Note: If an overloaded circuit causes the AC circuit breaker to switch off, reduce the electrical load on the circuit and wait a few minutes before resetting the circuit breaker.

10. The DC terminal may be used operating 12 VDC portable devices only.

⚠ WARNING: Do not use this generator to charge 12 VDC batteries without a charge controller. Directly charging a 12 Volt battery may cause the battery to overheat and possibly explode.

CAUTION: Do not attempt to start an automobile engine with this generator. Voltage feedback from the running automobile may damage the generator.

Note: The DC terminal may be used while the AC power is in use. An overloaded DC circuit will trip the DC circuit protector (push button comes out). If this happens, wait a few minutes before pushing in the circuit protector to resume operation.

11. Watch the Volt Meter to determine the current load on the generator. If the Volt Meter reading falls below 110 V~ (or the voltage requirement of attached devices), remove some devices from the system to reduce demand on the generator.

⚠WARNING! TO PREVENT SERIOUS INJURY FROM ELECTRIC SHOCK:

Use the GFCI unit properly.

If the power supply to either duplex outlet is interrupted, there may be a short in the attached device's wiring that is tripping the GFCI unit. Check all wiring connections carefully for moisture and damaged insulation before pressing the reset button.

If the GFCI unit trips again immediately or after a short while, discontinue use immediately and have the generator and the device attached to that outlet serviced by a qualified electrician.

Stopping the Generator

1. Turn OFF all attached devices.
2. Unplug the cords from the Generator.
3. Turn OFF the tractor engine.

SERVICING

WARNING TO PREVENT SERIOUS INJURY

FROM ACCIDENTAL STARTING:

Turn the Power Switch of the equipment to its “OFF” position, wait for the engine to cool, and disable the engine before assembling or making any adjustments to the equipment

WARNING TO PREVENT SERIOUS INJURY

FROM EQUIPMENT FAILURE:

Do not use damaged equipment. If abnormal noise, vibration, or excess heating occurs, have the problem corrected before further use.

Maintenance Procedures



Many maintenance procedures, including those not detailed in this manual, will need to be performed by a qualified technician for safety. If you have any doubts about your ability to safely service the equipment, have a qualified technician service the equipment instead.

Note: These procedures are in addition to the regular checks and maintenance explained as part of the regular operation of the engine and equipment.

1. Perform regular visual inspection of the Generator and PTO shaft. Look for loose or broken wires or defective connections. Check for missing, corroded or loose fasteners. Be sure all

shields and guards are in good condition. Inspect for general condition and cleanliness.

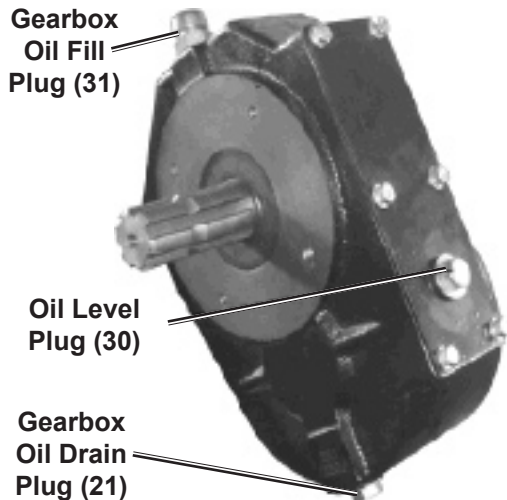
2. Keep the generator clean and free of dirt, grease or debris. Clean it regularly and whenever it becomes dirty. Use a soft brush, damp soft cloth or low pressure air to remove dirt and debris.

CAUTION: Do not use high pressure water spray to clean the generator. Injected water can damage the generator.

3. Protect the generator from high humidity and salt air environments.
4. Periodically clean the interior of the Generator Control Panel. Use compressed air, a dry brush or electrical contact cleaner to remove carbon build up and metal corrosion.
5. When cleaning, check for loose wires or damage. Be sure printed circuit boards are firmly plugged into their sockets.

Gearbox Oil Check

1. Check the oil level before each use and after each 10 hours of use. To check oil level, be sure generator is as level as possible.



2. The oil should be visible at least halfway up the Oil Level Plug (30).
3. If necessary, remove the Gearbox Oil Fill Plug (31) and add SAE 90 oil to fill to the recommended level. Replace the Oil Fill Plug.

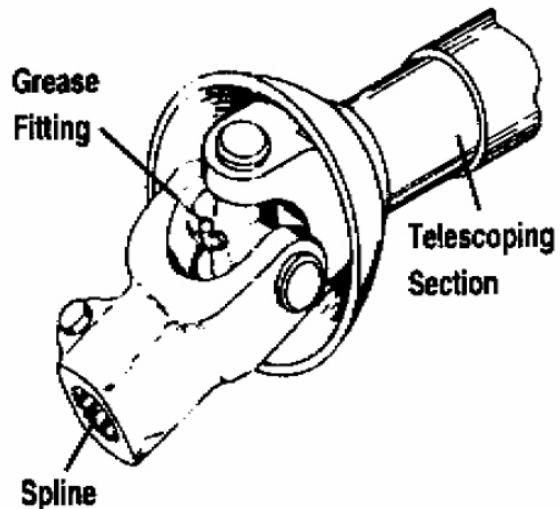
Changing Gearbox Oil

1. After the first 25 hours of operation, you must change the Gearbox oil. You must also change the oil after every 250 hours of operation, or each 6 months, whichever comes first.
2. To change the oil, operate the generator for approximately 30 minutes to warm the oil in the Gearbox (22). Then shut down the tractor and generator.
3. Immediately after shutting down, while the oil is still warm, remove the Oil Drain Plug (21) along with the Oil Fill Plug (31) to help the oil to drain.
4. Catch the draining oil in a suitable container. Dispose of the used oil properly.

5. After all the used oil has drained, replace and tighten the Oil Drain Plug (21).
6. Slowly add SAE 90W Oil until the oil is visible at least halfway up the Gearbox Oil Sight (30).
7. Replace the Oil Fill Plug (31) and tighten securely.
8. Recheck all plugs for tightness. Restart the Generator and check for leaks.

Lubricating the PTO shaft

1. The PTO shaft must be lubricated frequently.



2. Use a low pressure grease gun to inject lithium grease into the grease fittings. The grease fittings are located at both ends of the PTO shaft Universal Joint Bearings (13).
3. Also apply Lithium grease to the Splines and telescoping parts of the Shaft.

REV 09j

Storage

1. Wait for generator to cool, then remove from the tractor.
2. Clean equipment with clean dry cloth.
3. Check and top off Gearbox oil level.
4. Lubricate PTO shaft as explained previously.
5. Apply a thin coat of rust preventive oil to all uncoated metal parts.
6. Cover and store in a dry, well-ventilated area out of reach of children.
7. For cold weather operation, store the equipment in a cool dry area to prevent condensation and premature wear.

Equipment Troubleshooting		
Problem	Possible Causes	Probable Solutions
No output or low output	<ol style="list-style-type: none"> 1. Open or shorted rotor. 2. Open or shorted stator. 3. Generator operating below correct speed. 4. Generator overloaded. 5. Short circuit in load. 	<ol style="list-style-type: none"> 1. Replace rotor. 2. Replace stator. 3. Operate generator at correct speed. 4. Reduce load to rated output. 5. Disconnect load. Check voltage at all receptacles. Repair short.
Output voltage is too high.	<ol style="list-style-type: none"> 1. Incorrect Adjustable Voltage Regulator (AVR) setting. 2. Engine speed is too high. 	<ol style="list-style-type: none"> 1. Readjust Adjustable Voltage Regulator (AVR) setting. 2. Reduce engine speed.
Generator is overheating.	<ol style="list-style-type: none"> 1. Generator is overloaded. 2. Rotor is rubbing stator. 3. Poor ventilation. 4. Short circuit in stator. 5. Shorted turns in rotor. 	<ol style="list-style-type: none"> 1. Reduce load. 2. Check bearings (23 and 27). Repair or replace as needed. 3. Ensure generator air vents are clear. 4. Check stator, repair or replace as needed. 5. Repair or replace rotor.
Sparking at brushes.	<ol style="list-style-type: none"> 1. Generator is overloaded. 2. Brushes not seated properly. 3. Brushes sticking in holder. 4. Brushes worn to less than 3/8". 	<ol style="list-style-type: none"> 1. Reduce load. 2. Contour and re-seat brushes. 3. Remove brushes, clean holder and reinstall brushes. 4. Replace brushes. NOTE: Replace brushes in pairs.



Follow all safety precautions whenever diagnosing or servicing the equipment or generator.

PLEASE READ THE FOLLOWING CAREFULLY

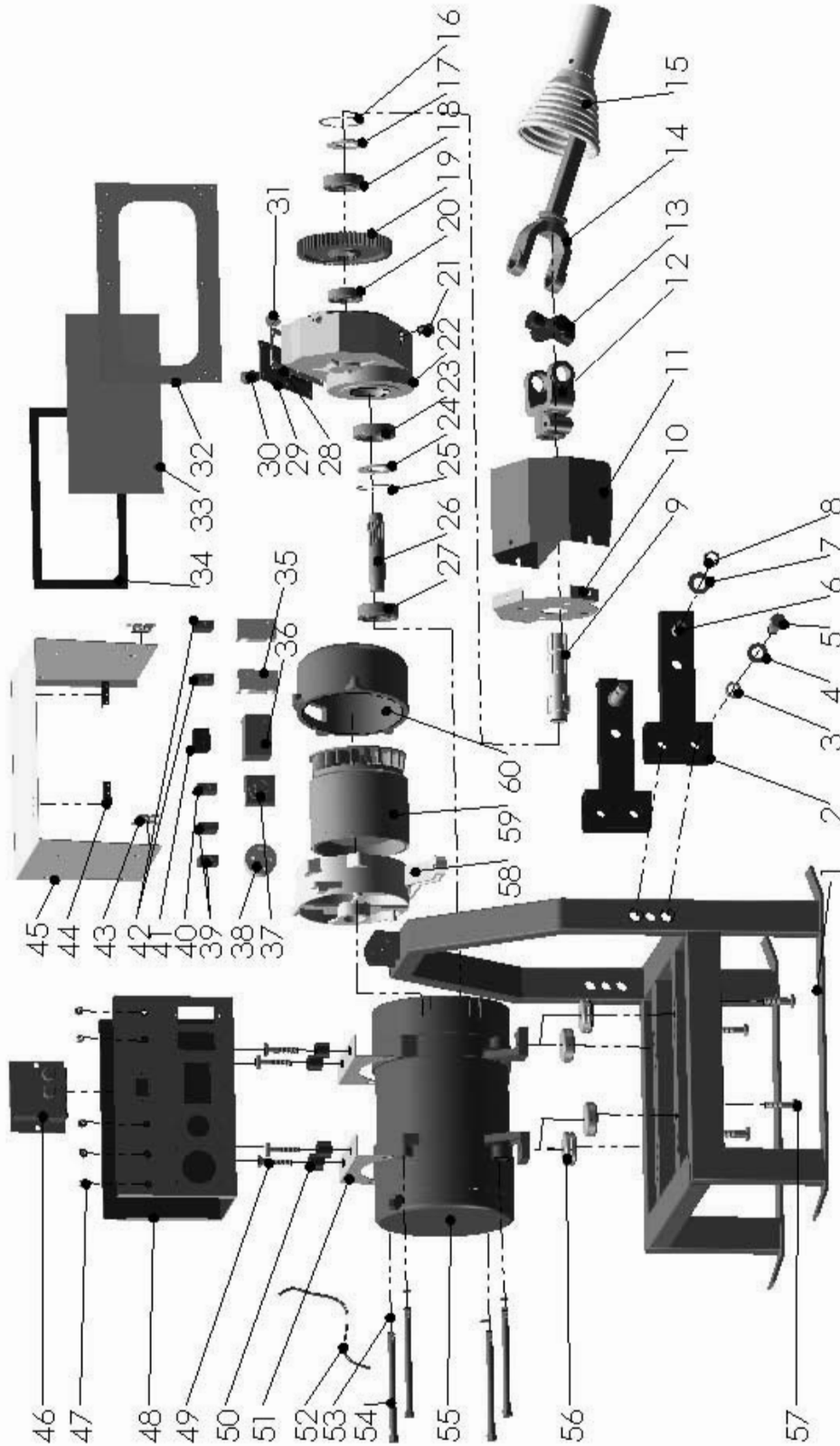
THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST		
Part	Description	Q'ty
1	Frame	1
2	Connecting Plate	2
3	Nut m12	4
4	Washer m12	4
5	Bolt m12 x 75	4
6	Pin m22	2
7	Washer m22	2
8	Locknut m22	2
9	Drive Shaft	1
10	Shield Plate	1
11	Shield Plate Cover	1
12	U-Joint	2
13	Universal Joint Bearing	2
14	Gimbal Arm	1
15	Gimbal Pipe	1
16	Washer m72	1
17	Seal m30 x 72 x 10	1
18	Sealed Bearing 6207-2Z	1
19	Center Drive Gear	1
20	Sealed Bearing 6206-2Z	1
21	Gearbox Oil Drain Plug m16 x 1.5	1
22	Gearbox Body	1
23	Sealed Bearing 6305-2Z	1
24	Seal m35 x 72 x 8	1
25	Washer m72	1
26	Output Shaft	1
27	Sealed Bearing 6306-2Z	1
28	Gasket	1
29	Gearbox Cover Plate	1
30	Oil Level Plug	1
31	Gearbox Oil Fill Plug	1

PARTS LIST		
Part	Description	Q'ty
32	Control Panel Frame	1
33	Control Panel Window	1
34	Control Panel Gasket	1
35	GFCI Receptacle	2
36	Meter	1
37	Locking 125V Socket	1
38	250 V Socket	1
39	Circuit Breaker 50A	2
40	Circuit Breaker 30A	1
41	T Receptacle	1
42	Circuit Breaker 20A	2
43	Gate Pin	1
44	Hinge	1
45	Control Box Cover	1
46	Adjustable Voltage Regulator (AVR)	1
47	Bolt m8 x 12	5
48	Control Box Body	1
49	Bolt m10 x 60	4
50	Rubber Shock Absorber	4
51	Control Box Bracket	2
52	Wire	1
53	Washer m12	4
54	Bolt m12 x 180	4
55	15 KW Alternator	1
56	m60 x 40 x 25 Shock Absorber	4
57	Bolt m12 x 60	4
58	Alternator Rear Cover	1
59	Stator & Rotor	1
60	Alternator Front Cover	1

REV 09d; 09j

ASSEMBLY DIAGRAM



LIMITED 1 YEAR / 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that for a period of ninety days from date of purchase that the engine/motor, the belts (if so equipped), and the blades (if so equipped) are free of defects in materials and workmanship. Harbor Freight Tools also warrants to the original purchaser, for a period of one year from date of purchase, that all other parts and components of the product are free from defects in materials and workmanship (90 days if used by a professional contractor or if used as rental equipment). This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

3491 Mission Oaks Blvd. • PO Box 6009 • Camarillo, CA 93011 • (800) 444-3353

Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.